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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,037	08/29/2003	Frank W. Barresi	006401.00033	1539
22908	7590	10/09/2007	EXAMINER	
BANNER & WITCOFF, LTD. TEN SOUTH WACKER DRIVE SUITE 3000 CHICAGO, IL 60606			MAIER, LEIGH C	
		ART UNIT	PAPER NUMBER	
		1623		
		MAIL DATE		DELIVERY MODE
		10/09/2007		PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/653,037	BARRESI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Leigh C. Maier	1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 July 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 109-128 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 109-128 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____.                                     |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.                                                         | 6) <input type="checkbox"/> Other: _____.                         |

## **DETAILED ACTION**

### ***Status of the Prosecution***

Claims 109-128 are pending. Any objection or rejection not expressly repeated has been withdrawn. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

It is noted that the previous Office action indicated that there may be some uncertainty as to the scope of the term “maltodextrin.” Upon further consideration of the art, the examiner agrees that one of ordinary skill would reasonably be apprised of the scope of this term. See, for example, Kennedy et al at chapter 3 of *Handbook of Starch Hydrolysis Products and Their Derivatives*, Kearsley & Dziedzic, ed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 109-115, 126 and 127 are rejected under 35 U.S.C. 102(b) as being anticipated by Masuda et al (JP 44-018898). Because the reference is in Japanese, the STN abstract is being used to indicate the contents of the reference. Kennedy et al (cited above) is also used to support inherency of a step.

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Masuda discloses the hydrogenation of maltodextrin to a nonreducing product, indicating a very low DE. The hydrogenation uses an activated nickel catalyst at 50-125°C with a pH of 8 and a pressure of 110 kg/cm<sup>2</sup> (1564 psi).

Regarding claims 126 and 127, maltodextrins are product which by definition are produced by the hydrolysis of starch. See section 3.2 of Kennedy. Therefore, even if it is not expressly disclosed, as some point before the hydrogenation step disclosed by Masuda, the maltodextrin used was produced by hydrolysis of starch.

#### ***Claim Rejections - 35 USC § 103***

Claims 109-128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al (JP 44-018898) in view of Chao et al (US 4,322,569).

Masuda teaches as set forth above. The reference is silent regarding the apparatus used.

Chao teaches the hydrogenation of monosaccharides with a high activity nickel catalyst in a fixed bed process. The reference further teaches a pH range of 7 to 13 and hydrogen pressure of 500-2000 psig. See abstract.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Masuda by the use of a catalytic bed for the hydrogenation process. In the absence of unexpected results, it would be within the scope of the artisan to select any apparatus known to have utility for this process. It would be further obvious to optimize the result effective variables, such as pH and pressure, in line with similar hydrogenation processes known in the art. It is noted that the range of 7 to 13 would be considered to overlap with the claimed range of about 4.5 to about 6.5.

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Claims 109-128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al (JP 44-018898) in view of Chao et al (US 4,322,569) and Borden (US 5,601,863).

Masuda and Chao teach as set forth above. The references do not teach hydrogenation at a pH lower than 7 or the full scope of the metal catalysts recited. Although, it is the position of the examiner that the range of 7 to 13 would be considered to overlap with the claimed range of about 4.5 to about 6.5, it is further noted that lower pHs are known in the art for this type of hydrogenation.

Borden teaches the use of a variety of metal catalysts, including Raney nickel, for the hydrogenation of polydextrose and polymaltose. See col 3, beginning line 42, continuing through the end of col 4 and examples. The preferred pH range for the hydrogenation is about 3 to 9, and the pressure range is about 50 psi to about 3000 psi. It is noted that polymaltose, or dextrin, differs from maltodextrin/maltooligosaccharides in that the DE of the unhydrogenated form of the former is lower, but their basic  $\alpha$ -1,4 structure is the same.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to hydrogenate a maltooligosaccharide with a metal catalyst for the art disclosed utility and further discussed above. It would be within the scope of the artisan to select any metal catalyst known for this utility. In the absence of unexpected results, it would be further within the scope of the artisan to optimize result effective variables according to teachings regarding similar hydrogenation processes known in the art with a reasonable expectation of success.

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***Examiner's hours, phone & fax numbers***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (571) 272-0656. The examiner can normally be reached on Tuesday, Thursday, and Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Anna Jiang (571) 272-0627, may be contacted. The fax number for Group 1600, Art Unit 1623 is (571) 273-8300.

Visit the U.S. PTO's site on the World Wide Web at <http://www.uspto.gov>. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

*Leigh C. Maier*

Leigh C. Maier  
Primary Examiner  
September 28, 2007